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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,387	06/27/2001	Yoshihiro Takashimizu	010803	2563

38834 7590 04/08/2005

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EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/891,387

**Applicant(s)**

TAKASHIMIZU ET AL.

**Examiner**

Dohm Chankong

**Art Unit**

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1> Applicant's amendment and remarks have been received. Claims 12-14 have been added. Claims 1-14 are now presented for further examination.

### *Response to Arguments*

2> Applicant's arguments, see page 10, filed 2.1.2005, with respect to the rejection(s) of claims 1-9 under 35 U.S.C § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art.

3> Applicant's arguments filed 2.1.2005 with respect to claims 10 and 11 have been fully considered but they are not persuasive.

On page 11, Applicant applies his argument against the rejection of claim 1 to the rejection of claim 10. While the argument was persuasive for claim 1, the same argument does not apply to claim 10. Specifically, Applicant had argued that the prior art disclosed two basic units that shared IP addresses and did not have identical IP addresses. This limitation is not present in claim 10 and therefore the argument is invalid.

Claim 10 is directed to only a single basic unit. There is no second basic unit that was disclosed in claim 1. Therefore the common unit only switches between the host computers and does not switch between a first and second basic unit. There is no mention of the host computers having the same network addresses. Therefore, the rejection of claims 10 and 11 are maintained.

*Claim Rejections - 35 USC § 112*

4> The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5> Claims 3 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 3 lacks proper antecedent basis: "the periodic status notice".
- b. Claim 6 lacks proper antecedent basis: "the host computer of the present system" and "the host computer of the standby system". From the claim language, one would infer there are two different host computers. However, in the parent claims, the claim language seems to suggest that the units are connected to the same host device. For instance, claim 1 discloses a relay apparatus to a host apparatus.

*Claim Rejections - 35 USC § 103*

6> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7> Claims 1-7 are rejected under 35 U.S.C § 103(a) as being unpatentable over Li et al, U.S Patent No. 5,473,599, in view of Wang et al, U.S Patent No. 6,587,970 ["Wang"].

8> As to claim 1, Li discloses a relay apparatus which is connected to a host computer through a network and transmits data received from said host computer to a device, comprising:

a first basic unit into which a peculiar network address is set and which performs a relay control between said host computer and said device [column 2 «lines 16-31» | column 6 «lines 40-57» where : the active router is analogous to a first basic unit, Li's virtual group address is analogous to a peculiar network address and Li's virtual router is analogous to a relay apparatus];

a second basic unit into which the same network address as that of said first basic unit is set and which performs a relay control between said host computer and said device [column 2 «lines 16-31» | column 6 «lines 40-57» where : the standby router is analogous to a second basic unit].

Li discloses making one of said first basic unit and said second basic unit operative as a present system, monitoring its status, and when an abnormality is detected during said monitoring operation, stopping the basic unit of the present system and switching it to an operation of the basic unit of a standby system [column 2 «lines 16-31» | column 3 «lines 29-39»], but does not explicitly disclose a common unit that performs the functions.

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9> Wang discloses the use of a controller unit that performs switching and monitoring duties [Figure 1 «item 160» | column 7 «lines 3-22»] for the obtained advantage of having an automatic detection and failover capability that is provided by the controller. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to have implemented Li's monitoring and switching functionalities into a separate controller as taught by Wang. One of ordinary skill in the art would have been motivated to perform this implementation in Li for the stated advantage of centralizing router selection, automatic failover detection and alleviating the responsibility from Li's routers.

10> As to claim 2, Li discloses the apparatus of claim 1, wherein each of said first and second basic units comprises:

a host communication control unit which is connected to said host computer and communicates therewith [Figure 1 | column 5 «lines 40-60»];

a device communication control unit which is connected to said device and communicates therewith [Figure 1 | column 5 «lines 50-60»];

a main control unit which performs a relay control for relaying the data received from said host computer to said device [column 5 «lines 27-39 and 61-67»];

a setting unit which inputs set information necessary for the relay [column 6 «lines 44-64» where : Li's network layer addresses are analogous to the information necessary for the relay];

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a secondary storing unit which stores resources including said set information, a control program, and character patterns from the host computer [column 4 «lines 52-63» | column 5 «lines 36-39»]; and

a status monitoring unit that performs a self-diagnosis [column 8 «lines 35-45»].

Li does not explicitly disclose a common unit.

11> Wang discloses a common unit comprising:

a common unit interface which is connected to said first basic unit and said second basic unit and communicates therewith [Figure 1 «items 110, 120, 160, 165A, 165B»];

a common unit address unit using a non-volatile memory which stores a common network address which is used for said first and second basic units [column 11 «lines 36-40» | column 11 «line 63» to column 12 «line 10»]; and

an abnormality detecting unit which, when the abnormality is detected from a status notice of the basic unit of the present system, instructs a power-off of the basic unit of the present system, thereafter, instructs a power-on of the basic unit of the standby system, and further transmits the common network address stored in said common unit address unit to said host communication control unit of the basic unit of the standby system, thereby allowing said common network address to be taken over [column 8 «lines 15-41» | column 11 «lines 36-62»]. It would have been obvious to one of ordinary skill in the art to incorporate Wang's common unit into Li's redundancy scheme to enable detection and failover control in a centralized controller thereby providing automatic switchover capabilities to the backup when the primary router fails [Wang - column 8 «lines 38-41»]. Furthermore implementing

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the common unit in Li's system would enable a central controller to implement power supply control over the routers' to allow failed routers to be taken off-line [Li - column 8 «lines 37-38»].

12> As to claim 3, Li and Wang disclose the apparatus of claim 1, wherein said abnormality detecting unit of said common unit has a timer which sets a predetermined set time and is reactivated each time the periodic status notice from said basic unit is received and detects abnormality of the basic unit of the present system from time-out of said timer [Li - column 10 «lines 46-65»].

13> As to claim 4, Li and Wang disclose the apparatus of claim 2, wherein if said common network address cannot be received from said common unit upon activation by a power-on, said host communication control unit of each of said first and second basic units reads out a common network address stored in a self address Rom and sets it [Li - column 16 «lines 41-52»].

14> As to claim 5, Li does not explicitly disclose the common unit, or that the first and second basic units having a power control unit.

15> Wang discloses:

said common unit has a processing system selecting switch which selects the basic

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unit of the present system [Figure 5 | column 18 «lines 7-20» where: the primary host computer is analogous to the basic unit];

said common unit interface instructs a power-off to the basic unit of the present system, and thereafter instructs a power-on to the basic unit selected by said processing system selecting switch in response to a notice of a power-on operation from said first basic unit or said second basic unit [column 16 «line 48» to column 17 «line 13»]; and

each of said first and second basic units has a power control unit which notifies said common unit of the power-on operation at the time of a turn-on operation of a power switch, turns on a self power source when a power-on instruction is received from said common unit, and turns off the self power source when a power-off instruction is received from said common unit [column 8 «lines 15-41» | column 16 «lines 24-32»].

It would have been obvious to one of ordinary skill in the art to incorporate Wang's common unit and power-on/off capabilities into Li's redundancy scheme to enable detection and failover control in a centralized controller thereby providing automatic switchover capabilities to the backup when the primary router fails [Wang – column 8 «lines 38-41»]. Furthermore implementing the common unit in Li's system would enable power supply control over the routers to ensure that they are no longer active on the network.

16> As to claim 6, Li discloses the apparatus of claim 5, wherein:

when the host computer of the present system and the host computer of the standby system are arranged through the network [Figure 2b],

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each of said first and second basic units stores each set information of said host computer of the present system and said host computer of the standby system [column 7 «lines 30-61»].

Li does not disclose a common unit having a host selecting switch which instructs a selection of the host computer of the present system or the host computer of the standby system and responds a selecting instruction of said host selecting switch in response to the notice of the power-on operation from said basic unit or said second basic unit, and the first basic unit or the second basic unit which received the power-on instruction from said common unit is initialized by the set information of said selected and instructed host computer and starts the relay operation.

17> Wang discloses a common unit having a host selecting switch which instructs a selection of the host computer of the present system or the host computer of the standby system and responds a selecting instruction of said host selecting switch in response to the notice of the power-on operation from said basic unit or said second basic unit [column 8 «lines 15-41»],

and the first basic unit or the second basic unit which received the power-on instruction from said common unit is initialized by the set information of said selected and instructed host computer and starts the relay operation [column 11 «line 63» to column 12 «line 10»].

It would have been obvious to one of ordinary skill in the art to incorporate Wang's common unit power on/off and host initialization functionality into Li to centralize control

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of the switchover in one common unit, and to ensure proper initialization of the backup unit with the same parameters as the failed master unit. This permits the backup unit to continue operations with nearly the same information and data as the master unit when the master unit fails.

18> As to claim 7, Li discloses the apparatus of claim 2, wherein a plurality of devices is connected to said device communication control unit of each of said first and second basic units by a common local area network [column 6 «lines 9-26»].

19> Claims 8 and 9 are rejected under Li and Wang, in further view of Applicant's admitted prior art [“AAPA”].

20> As to claim 8, Li discloses an apparatus wherein a plurality of devices is individually connected to said device communication control unit of each of said first and second basic units [see claim 7 supra] but does not explicitly disclose that they are connected by coaxial lines through a switching mechanism.

21> AAPA discloses that it is well known in the art to have an apparatus wherein a plurality of devices such as displays and/or printers and the like are individually connected to said device by coaxial lines through a switching mechanism [Figure 4B]. It would have been obvious to one of ordinary skill in the art to incorporate the coaxial lines and switching mechanism taught by the AAPA to increase the connective functionality of Li's apparatus by

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allowing a wider variety of devices, such as coaxial devices, to be able to connect to his system.

22> As to claim 9, Li does not specifically disclose a coaxial communication control unit which connects a plurality of devices such as displays and/or printers and the like by coaxial lines is connected to said device communication control unit of each of said first and second basic units through a common local area network.

23> AAPA discloses a coaxial communication control unit which connects a plurality of devices such as displays and/or printers and the like by coaxial lines is connected to said device communication control unit of each of said first and second basic units through a common local area network [Figure 4B «items 212-1 and 212-2»]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate AAPA's coaxial communication control unit into Li's system to have a central control for the coaxial units that are connected to the apparatus.

24> Claims 10 and 11 are rejected under 35 U.S.C § 103(a) as being unpatentable over Wang, in view of Kanekar, U.S Patent No. 6,751,191 [“Kanekar”].

25> As to claim 10, Wang discloses a relay apparatus which is connected to a host computer of a present system or a host computer of a standby system through a network [Figure 5 | Figure 12], comprising:

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a basic unit into which a peculiar network address is set and which performs a relay control between said host computer of the present system or said host computer of the standby system and the device [Figure 5 «item 515» | column 18 «lines 29-45» | column 21 «lines 22-46» where : Wang's network director is analogous to a basic unit]; and

a common unit which instructs said basic unit to select the host computer of the present system or said host computer of the standby system and activates the selected host computer [Figure 5 «item 160» | column 21 «lines 22-46» where : Wang's controller is analogous to a common unit].

While Wang does disclose all the claimed limitations spread out over a network, he does not disclose that these units are all located in one unit.

26> Kanekar discloses housing basic and common units into a single chassis [Figure 3 | column 6 «lines 9-20»] for the purpose of enabling similar configurations for the basic units. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Wang's controller and network director into a single relay apparatus similar to Kanekar's single chassis configuration. One would have been motivated to perform this implementation for the obtained advantage of efficiency and ease of incorporating the device into a network.

27> As to claim 11, Wang discloses an apparatus according to claim 10, wherein, said basic unit comprises:

a power control unit which notifies said common unit of a power-on operation at the

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time of a turn-on operation of a power switch and, thereafter, turns on a power source

[column 8 «lines 15-41»];

a secondary storing unit which stores resources including each set information of said host computer of the present system and said host computer of the standby system [column 9 «lines 37-54»];

a host communication control unit which is initialized by the set information of the host computer which was selected and instructed from said common unit, is connected to said host computer, and communicates therewith [column 9 «lines 55-66»];

a device communication control unit which is connected to said device and communicates therewith [Figure 1 «items 110, 145A, 130» where: the storage system is analogous to said device]; and

a main control unit which performs a relay control for relaying data received from said host computer to said device [column 5 «line 64» to column 6 «line 17» | column 38 «lines 20-29» where: the users are analogous to a host computer, the storage system (where the site is located) is analogous to said device],

and said common unit comprises:

a host selecting switch which instructs a selection of the host computer of the present system or the host computer of the standby system [column 8 «lines 15-41» where; the controller is comparable to the common unit]; and

a common unit interface which is connected to said basic unit and communicates therewith and responds a selecting instruction of the host computer by

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said host selecting switch in response to a notice of a power-on operation from said basic unit [column 8 «lines 15-41»].

28> Claim 12 is rejected under 35 U.S.C § 103(a) as being unpatentable over Li and Wang, in further view of an Official Notice.

29> Li discloses that a plurality of network devices connected to the basic units [column 6 «lines 14-23»] but does not explicitly disclose at least one of a display and a printer. However Official Notice is taken that displays and printers are ubiquitous in the art as network devices. One of ordinary skill in the art would have been motivated to include such devices into Li's network segments to enable the host computers with the added functionality of having a printer. Furthermore, a display is part of all computers, and therefore is inherent to Li's host computers.

30> Claims 13 and 14 are rejected under 35 U.S.C § 103(a) as being unpatentable over Li and Wang and AAPA, in further view of an Official Notice.

31> As to claims 13 and 14, as they do not teach or further define over the limitation of claim 12, claims 13 and 14 are rejected for the same reasons set forth for claim 12, supra.

### *Conclusion*

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S Patent No. 5,835,696 to Hess;

RFC 2281 ["Cisco Hot Standby Router Protocol"] to Li et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942.

The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC



Dung C. Dinh  
Primary Examiner